Still Alive With Sir Clive!

ZXir QLive Alive!

The Timex/Sinclair NorthAmerican User Groups Newsletter

Volume 12 No. 2   Summer 2002

MEMORY MAP

ZXir QLive Alive! ©

Established 1991 The Timex/Sinclair NorthAmerican User Groups Newsletter

T/SNUG Information

We wish to support the following platforms: ZX-80/81, TS-1000, Spectrum, TS-2068, Z88 and QL. If you have any questions about any of these fine Sinclairs, contact the:

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--==GATOR==--
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ZXir QLive Alive!

Is the newsletter of T/SNUG, the Timex/Sinclair North American User Groups, providing news and software support to the T/S community in a VOLUME of four newsletters per year; beginning with the Spring (March) issue.

T/SNUG's main goal is to preserve and encourage the use of Sinclair computers by providing an open forum for the exchange of knowledge, building and maintaining of software libraries. Providing vendors, repair service and members with free ad space.

It is the user groups and individual subscribers, rather than the vendors, that provide the pecuniary support for this newsletter. Vendors and developers receive this newsletter free of charge, though contribution from vendors and user groups is gratefully accepted. Please support our vendors and service providers whenever possible.

If you have a problem or you have solved a problem, please share it with the rest of us. No problem will be considered unimportant.

Editor/Treasurer/Publisher

You can keep T/SNUG alive by an annual contribution of $14 for one VOLUME made payable to Abed Kahale. Send check to:-

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Back copies are available for $1.50 each postpaid.

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Send in your articles and inputs by disk, hardcopy mail, or e-mail to:

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WEBPAGES

http://www.timexsinclair.org
http://groups.yahoo.com/group/ts2068/
ql-users@nvg.ntnu.no
ql-users@quanta.org.uk
www.geocities.com/NESQLUG1/

Trea$ury Note$

As of June 18, 2002, we have a balance of $286

Input/Output

by Abed Kahale

Hi Abed,

Freebies

I am trying to get rid of as much stuff accumulated over the years as possible. Some I'm pretty sure nobody would want - like my Zenith Monochrome **Monitor** (when using a monitor instead of a TV with a QL was really progress!) - but I hate to toss magazines and Newsletters without making sure there's no one in the Sinclair family who might want them. The present offering is a complete set of **International QL Reports** (later shortened to **IQLR**) from Vol. 1-1 in 1991 through Vol. 5-6 in 1996. Any or all issues are free for the asking. I also have many back copies of **UPDATE** magazine, from the time Frank Davis took it over until he called it quits. They are also in the *freebie* category. As is the aforementioned monitor which I haven't taken out of the carton for years, but it was working when I last used it about ten years ago - for what that is worth. (I even have the instruction manual and probably a cable - all in the original carton!)

Because I've tightened up security on my Hotmail account so that only messages from addresses already in my Address Book are sent to my Inbox (everything else to Junk Mail, I don't always scan these carefully because so much Spam arrives daily) it would be wise to list my e-mail address as:

ruth.fegley@Worldnet.ATT.net.

Hopefully no one will abuse this address which I try to keep for personal messages.

A working **2068** can also be added to the list. I'm pretty sure I even have a User Manual. Oh, yes, I have a **2020** Tape Recorder which I had ready to mail to a ZXir QLive Alive reader who wanted one but he never responded to my e-mail offer, so I assumed he found one somewhere else.

I'll add here that there is still a balance in the old CATS Treasury, so the shipping charges for any of this stuff can be paid for out of it. All we ask is that anyone who requests the stuff is planning to use it; not sell it! But I truly would find it hard to believe that anyone in the Sinclair family would reduce to that level.

Ruth Fegley
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Baltimore, MD 21209-3547
ruth.fegley@worldnet.att.net

Hi Abed,

Sorry to be so out of touch. Lots of things going on and not all of them pleasant. I believe I had your new email address, but since my computer got fried in a lightning storm last fall I have had noting but trouble with the newer one. I still am unable to upload to my ISP, so there have been no updates to the web page for quite a while.

I haven't done anything TS-related for quite a few months now. I'd still like to get a **Zebra** (Timex) **FDD** system some day. I do have the power supply unit for the **FDD**, just no interface, controller or disk drives.

Do you know of anyone with one for sale or trade? Or any of the parts I need?

I got an email from Jeff Moore (SyncWare News) stating that there are still a few back issues of that magazine available. The trouble is that I lost his address when my PC got fried so don't know how to contact him.

I still have lots of stuff for the TS computers, but still haven't gotten completely organized enough to get a comprehensive listing available. I even have a few ZX Spectrum items that I bought from people in the UK. I have some 5 1/4" disk drives that were in the items from Rod Gowen a couple years ago. Most of them are full-height drives. These can be had for shipping cost, but I can't guarantee they will arrive in workable condition. I had that problem with 2 drives I shipped to Luke Perry a while back. They worked fine here but one of them got damaged during shipping.

Jack Boatwright
jboatno4@outlawnet.com

Greetings Abed,

Nice to hear from you. Things must be getting a bit thin on the QL publishing scene? Alas, I have little help for you. I probably haven't fired up the QL in a year.

I am **looking around for an emulator**, though. I've written some basic programs that I'd like to be able to use on the PC, and I'd like to port over some ABACUS and ARCHIVE data to Access and Excel. So many files, so little time.

I also have plans to set up a QL in my shop, with the ROM card, to help solve trig problems and derive feeds, speeds and tool geometry's. I'd almost forgotten about that, Abed. Thanks for jogging the old memory. Al Boehm and Bill Cable still 'QL', and possibly Gary Norton and Kevin O'Leary.

NESQLUG hasn't had an actual meeting in some time. Al is in Alabama, Gary and I are in Mass, Bill and Kevin are in NH. Getting a quorum is tough, but Al, and Bill's son Rigel, are keeping things going on the NESQLUG website .

Just remembered, I **did** use the QL - at Halloween - to run a *talking* skull program (from the NESQLUG software library), something I've been doing every Halloween for close to 10 years. I prop a monitor up in the porch window, kick in my daughter's strobe, and play the theme music from "Twin Peaks", (at half speed), to set the right mood. David Lynch meets Clive Sinclair. It doesn't get much stranger than that. Take care.

Ed Kingsley
edk4@aol.com

I just received a phone call a few minutes ago from a friend of **Kenton Garrett** in Lansing, Kansas, that Kenton passed away today, 6/7/02. He suffered a massive stroke several months ago from which he never recovered. He was 83.

I thought you and the many others would want to know who knew him through the years of his avid interest and support of Sinclair computing. Truly he was a man with many talents and interests and travels and a wide circle of friendships.

He served in the U.S. Army during World War II. He graduated from the University of Oklahoma. He was an archeologist. He worked for Mobil Oil as an archeologist and for the state of Kansas as an accountant.

He was a member of the Archeology Society, the Sinclair Computer Club and a life member of the Keystone Class.

Bob Hartung
revrdhtp@netscape.net

Hi Abed,

Certainly, the 2068 was one of the best — if it had a better keyboard, IMO, it would have sold *many* more because the 2068 (and, all Sinclairs) did *not* look like something you could plop on the desk in a *business* environment.

The original IBM PC cost 10X more, did less, but was not an embarrassing toy-looking thing for a newbie to have sitting in his den.

Al Feng
alfeng@juno.com

Hi Abed,

Found this (LarKen Disk Drive schematic), expect that you may have this but if not here it is. I have no idea of the source of this or the exactness of the circuitry.

I have been experimenting in electronics except when I am doing a honey-do project for the wife. Seems there are a lot of those. As I get older (76 now) it does take longer. Last week in the unseasonably warmer weather (got up to 88°) I put in a crimson maple tree and the ground was very hard. In this housing area it is mandatory to have two trees in the front yard.

My health is holding good, about the only thing that is good it seems. Kids and grandkids are doing good so that is not a worry. After you reach 70 if you have health you are doing great.

Donald S. Lambert
738 Gunnar Ln.
Forsyth, IL 62535-8904

On the Timex Sinclair front, I don't know if you knew that the **unofficial** Timex Sinclair 2068 had its URL changed. Its up and working at

http://www.timexsinclair.org

My intent would be to have a TS1000 and TS1500 sections as well, besides the TS2068, but as I've not really collected information on those, I put out a request to the community that if they have miniwebsites for these computers, I'd be willing to host them as part of the www.timexsinclair.org site. Please e-mail me at florit@unixville.com if you're interested in this.

Finally, the 2068 email list I've hosted for some years was moved to Yahoo! groups; their service is a bit ad heavy, but the days of free rides on the internet are gone. Using Yahoo groups makes the list a bit more stable, and has some nice facilities that make it a bit easier to manage. Please point your browser to

http://groups.yahoo.com/group/ts2068/

to find out how to subscribe, or drop me an email if you'd like me to add you. Have a great summer. Please note my address change.

Louis Florit
5445 SW 150 Place
Miami, FL 33185
florit@unixville.com

Everyone who had been praying for Frank and Carol Davis of FWD Computing in Mexico, Indiana, near Peru, after their terrible accident at the beginning of the year that almost took their lives, were glad to see them at the fest in such good spirits though with still some pain. Frank and Carol provided the most colorful shirts and mouse pads in some time. They brought us (CoCoFEST) this year quite a collection of CDs of classic old time radio shows.   – – = =GATOR= = = – –

Robert E. Swoger - K9WVY
Rswoger@aol.com

QL -users mailing list has moved to **ql-users@quanta.org.uk**

This is because the Norwegian host was locking too many users. Unfortunately it was announced as www.quanta. org.uk - it should **not** have the 'www.'

Mailing lists are a very good way of simulating usenet news areas. It is all done by simple emails, but any emails sent to the group address get sent to everyone else on the list, including the sender (if he/she is registered on the list). Good mailers (like Turnpike) will allow the user to configure routeing to 'mailing lists'. This has the advantage of not going to the normal email file, and will probably get listed by subject, with a 'tree' structure.

To subscribe, send an email to ql-users@ quanta.org.uk with subscribe **ql-users** in the body of the message and configure a **mailing list** in your mailer software. QBBS (QL fido BBS 2:257/67) +44(0)1442-828255 mailto: tony@firshman.demon.co.uk
http://www.firshman.demon.co.uk
Voice: +44(0)1442-828254 Fax: +4(0)1442-828255

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Tring, Herts, HP23 4DG, UK

QPC2 *for Windows*

*O*ne of the last articles I wrote for ZQA! was on the subject of the QPC1 emulator for QL that runs in DOS mode on a PC. It was created by Marcel Kilgus at the age of 16. He has been much involved with Sinclair computers since he was 8. Anyone who wants to read more about this very remarkable young man may go to his web site at http://www.kilgus.net When QPC2 for Windows first became available, a copy of QPC1 was bundled with it for some time, but was no longer available when I ordered my QPC2 v.3.02 upgrade from Jochen Merz Software. I kept copies of QPC1 to use on my Windows 95/DOS computer with a Canon 210 printer for two reasons. The first is that, while QPC2 may be used under any Windows version 95 through XP, it requires an installation of DirectX, which Windows 95 does not have but can be downloaded from the Microsoft site. Also, a true DOS mode is not available in any Windows version from 98 onward.

*M*ore importantly, the ESC/P2 printer standard required by programs written for the QL (and also older DOS programs) is no longer supported on most printers made since Windows 98 came out. This is not the fault of QPC2, and a third-party programmer is currently working on an emulator that will translate printer data to that which a non-ESC/P2 printer can understand. In the meantime I simply use a floppy to transfer to my QPC1 setup any file from QPC2 that I want to print.

*T*he installation of QPC2 on my Windows 98 SE computer was quite simple and painless. The first time it is started, either from a Shortcut icon or from Programs, a configuration screen comes up. The dialog offers adjustment of screen resolution and every other adjustment and default setting that is available. If the screen is left at the default of 512 X 256 for the classic QL display, when QPC2 is running it can be made to fill the entire screen by doing a mouse click on the Windows Maximize button in the top-right corner. The mouse is also available for use in any QL program that is written for it. SMSQ/E SBASIC has added and extended many commands.

*M*ost important in the configuration process is to define the WIN drives that are to be used to store and access programs and data files in their respective folders. Floppy drive A: is FLP1 and the default setting will look first for a BOOT file there and then, if none is found, in a designated WIN drive. WIN drives 1-8 are available. I have the following definitions:

Win1 C:\QXL.WIN for the main hard drive
Win2 D:\QXL.WIN for my 250 Mb. ZIP drive
Win3 E:\QXL.WIN for my primary CD drive
Win4 F:\QXL.WIN for my CD-RW drive

*I*f the hard drive is partitioned, as the one is that I use with my QPC1 setup, the WIN drive numbers are adjusted accordingly. QXL.WIN is the default name given to a big empty file created under QPC (5 Mb. to 100 Mb. or more) within which QL programs and data files are stored and accessed. It is interesting that the same technique is used by Roxio DirectCD to create an empty 700 Mb. Read/Write/Re-Write file on a CD-RW disc within which QPC may then create its own QXL.WIN file. The data files on the ZIP drive I use with QPC1 may be used with QPC2 and vice versa. One 52 Mb. QXL.WIN file on a ZIP cartridge contains all the programs and files I had on microdrives and floppies up to the time I started using QPC1. In effect, with all the replaceable capacity of both ZIP and CD-RW drives, it is like having unlimited storage for more than I'll ever have time or ambition to do!
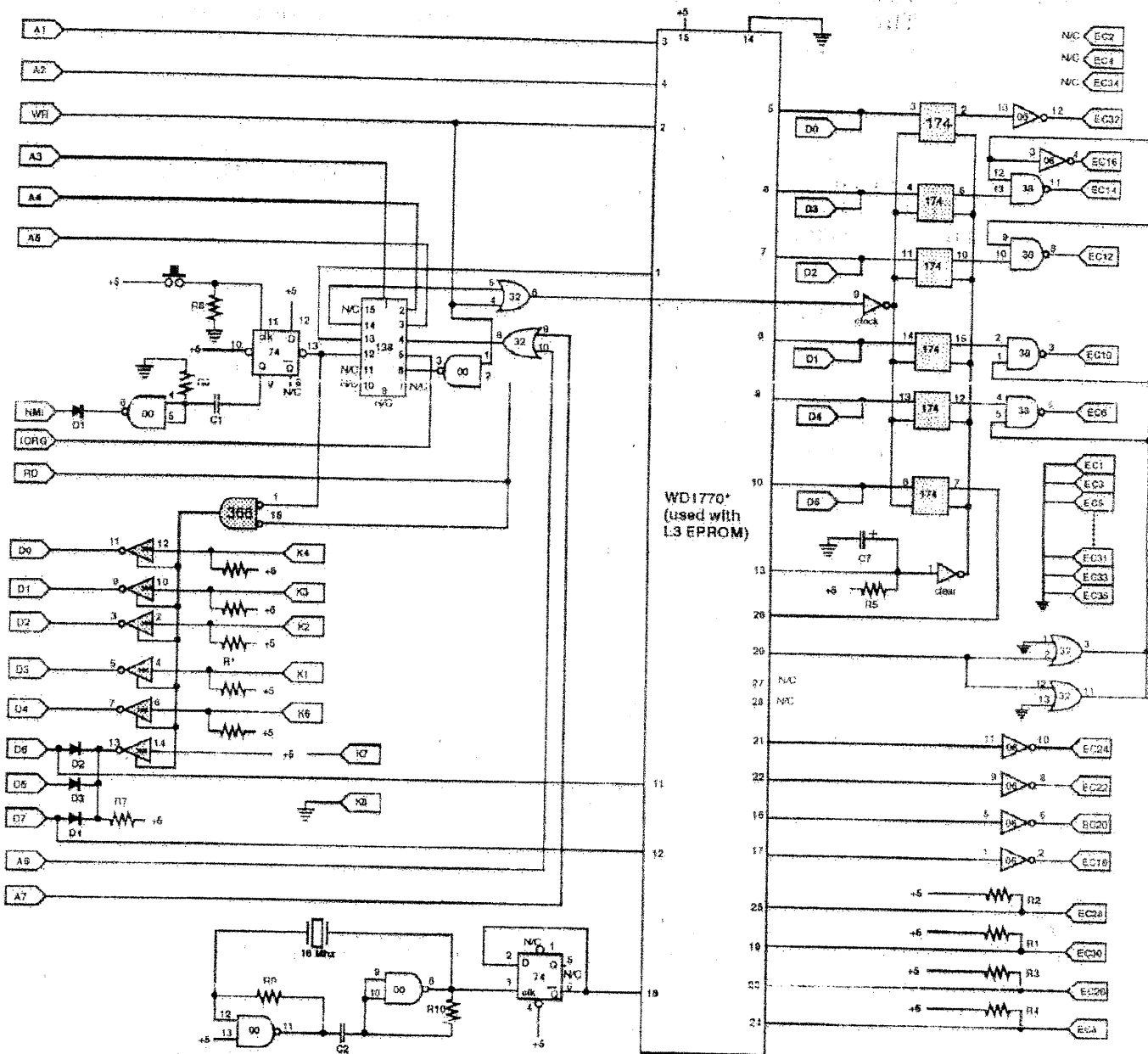
Robert D. Hartung
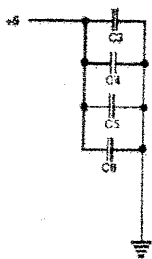2416 N. County Line Road E.
Huntertown, Indiana 46748
(260)637-3081

filter capacitors

between 00 & 74

between 32 & 1770

between 1770 & 7406, 7438

between 174 & disk connector

component	marking	value
R1,R2,R3,R4	R-BK-BN	200Ω
R5,R6	BN-GY-R	1800Ω
R7,R8	BN-BK-R	1000Ω
R9,R10	Y-V-BN	470Ω
R'		391 x 5 SIP
C1	102	.001µF
C2	471	.00047µF (470pF)
C3,C4,C5,C6	104	.1µF
C7	22µF, 10v	
diodes	1N4148	

chips

WD1770'	74LS00	7406
74HCTLS32	7438	74LS74
74LS138	74HCTLS174	74LS066

16 Mhz crystal

* or WD1772
(used with L3I EPROM)

Tasword To M-Script File Conversion

From David Solly

This is a ZX Spectrum utility for converting Tasword files into M-Script files. The first program generates and saves the machine code that is required to do the conversion. The second program loads and launches the machine code and steps the user through the conversion of files. This utility can be used in conjunction with the Sinclair ASCII Text To IBM Text conversion utility created by David Solly.

Program Number 1

```
   1 REM Tasword II to M-Script
(ASCII) Conversion
   2 REM This program generates a
block of machine code that will be
used to convert Tasword II files into
M-Script (ASCII) files
  10 RESTORE
  50 LET t = 0
 100 FOR i = 1 TO 86
 110 READ a
 120 POKE 65279+i, a
 130 LET t = t + i * a
 140 NEXT i
 150 IF t <> 428022 THEN BEEP 1, 1:
PRINT "Error in DATA!": STOP
 200 SAVE *"m";1;"TS>MS.Cm"CODE
65280,86
 210 BEEP 1, 1: CLS : PRINT "Machine
code save successful": STOP
 500 DATA 33,0,108,84,93,19,54,32,1,0
 510 DATA 75,237,176,201,0,0,0,0,0,0
 520 DATA
33,255,182,62,32,43,190,40,252,35
 530 DATA
34,86,255,33,0,108,17,79,183,6
 540 DATA
0,14,64,190,32,6,235,43,54,13
 550 DATA
```

```
35,235,237,176,235,43,190,40,252,35
 560 DATA
119,35,229,42,86,255,167,237,82,225
 570 DATA
235,48,224,235,17,79,183,54,0,35
 580 DATA 167,237,82,68,77,201
8999 STOP
9000 REM Save routine
9010 ERASE "m";1;"TS>MS.Bc"
9020 SAVE *"m";1;"TS>MS.Bc"
```

Program Number 2

```
 100 RANDOMIZE USR 65280
 110 CLS : INPUT "Enter the drive to
be used (1-8) > ";no
 120 CLS : CAT no
 200 INPUT "File Name? > ";n$
 210 IF n$ = "" OR LEN n$ > 6 THEN GO
TO 200
 220 LOAD *"m";no;n$ + ".Ct"CODE 27648
 250 LET len = USR 65300
 260 INPUT "Save fule as: ";s$
 270 IF s$ = "" THEN LET s$ = n$
 280 IF LEN n$ > 6 THEN GO TO 260
 290 SAVE *"m";no;s$ + ".CS"CODE
46972,len
 300 PRINT #1;"Convert another file?
(Y/N) > "
 310 PAUSE 0: LET s$ = INKEY$: IF s$ =
"Y" OR s$ = "y" THEN GO TO 100
 320 IF s$ = "N" OR s$ = "n" THEN STOP
 330 GO TO 310
9800 LOAD *"m";1;"TS>MS.Cm"CODE
9810 GO TO 100
9900 ERASE "m";1;"TS>MS.Bm"
9910 SAVE *"m";1;"TS>MS.Bm" LINE 9800
```

Sinclair ASCII Text To IBM Text File Transfer Utility

Article And Programs By David Solly
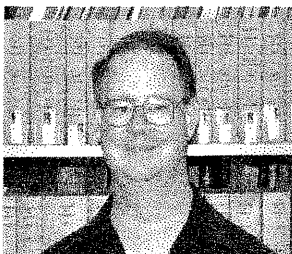
This program is written in HiSoft Pascal, version 1.7M for the ZX Spectrum and designed to be run under "Z80", the ZX Spectrum Emulator for DOS, version 3.0 or higher, created by Gerton Lunter (henceforth referred to as "the Emulator"). This utility will quickly transfer the contents of a Sinclair

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ASCII text file[i] to an IBM text file[ii] directly from cassette tapes or from *.TAP or *.MDR files by way of the Emulator's RS232 output to IBM text file feature.

The program is intended for the transfer of raw text from one file format to another. It will not expand Sinclair tokens nor will it interpret imbedded text processor formatting commands. The resulting IBM text files, however, can be processed using such PC editing and word processing packages as MS-DOS Editor, WordPerfect, Microsoft Word, Word Pad and similar programs.
There are several advantages to transferring text in this manner.

- A Timex/Sinclair 2068 or a ZX Spectrum computer is not required. Files stored on cassettes can be loaded by means of a simple Tape to PC interface.

- HiSoft Pascal programs are compiled and run as machine code. Therefore, transferring files is very fast.

- It does not require having the software that created the Sinclair ASCII text files.

- The file transfer utility auto-detects the length of each file being transferred.[iii] This saves the user some additional steps plus it speeds up the transfer of short files.

Creating the Program

Step 1: Creating A Clean Slate

Because the Emulator's RAM usually contains some random garbage, it is necessary to create a clean slate in the section of RAM that the transfer utility uses as its document buffer before each Sinclair ASCII text file is loaded. The transfer utility achieves this by first loading into the document buffer a large array containing nothing but null characters. The null character also doubles as a signal to the transfer utility that the end of the current file has been reached and to stop transferring data to the IBM text file.

This first program creates the required character array, fills it with nulls, then saves the array to an MDR file on microdrive 1 as *NopArr.A$*. A document buffer of 16,700 bytes was chosen because it is the largest text file that can be created using M-Script. It is also near the limit of the size of file capture and transfer buffers found in most telecommunication programs.

Listing For The Auxiliary Program

```
NOPARRAY

{$C-} {Shut off keyboard checks}
PROGRAM NOPARRAY;
```

■■■

Null Array Generator Requirements

HiSoft Pascal 1.7M for the ZX Spectrum, Z80 (ZX Spectrum Emulator for DOS created by Gerton Lunter), version 3.0 or higher.

The function of this program is to create a large array of null characters that will be used to clear a similar array in the Sinclair text file to IBM text file conversion program.

The program displays which element is clearing in the array as it progresses. When the array has been cleared, it is saved to the microdrive as NopArr.A$ and a "End of program" message is displayed. Program by:

David Solly
Bibliotheca Sagittarii
Ottawa, Ontario
Canada
27 October 1998

****

```
CONST
  NOP = CHR(0); {Null character}

VAR

  I, J {Loop counters}
    : INTEGER;

    AR {Character array}
      : ARRAY[1..16700] OF CHAR;
BEGIN {MAIN PROGRAM}

PAGE; {Clear the screen}

FOR I := 1 TO 16700 DO
BEGIN
  WRITELN('Working on element ',
I:5:H);
    AR[I] := NOP;
END; {FOR I}

{Transfer the array to the
microdrive}

TOUT('1:NopArr.A$',ADDR(AR),SIZE(AR
));

WRITELN;
WRITELN;
```

```
WRITELN('Character array NopArr.A$
is now saved to microdrive');
WRITELN;
WRITELN('End of program.');

END.
```

Step 2:
Entering Compiling the Transfer Utility Program

Once the null array has been generated and stored as a microdrive file, the utility program is entered in 51 column mode and compiled. The listing is pretty straight forward and self explanatory. The source code and compiled program should be saved on the same microdrive file as the null array generation program. Be careful to type the file names used in the TIN() and TOUT() commands just as shown otherwise the program will stop with the run time error "file not found".

```
{$L-} {Makes for faster
compilations}
PROGRAM SinclairTextToIBMText;

**********************************
```
Transfer Utility Program:
Sinclair Text files to IBM text files
Requirements:
HiSoft Pascal 1.7M for the ZX Spectrum, Z80 (ZX Spectrum Emulator by Gerton Lunter), version 3.0 or higher
Use 51 column mode for compiling this program.
The function of this program is to create IBM text files from Sinclair Text files such as those created by M-Script and other ZX Spectrum and Timex/Sinclair 2068 programs.
Program by:
David Solly
Bibliotheca Sagittarii
Ottawa, Ontario
Canada
27 October 1998

```
**********************************
CONST
  MAXBYTES = 16700; {Largest file
possible}
  NOP = CHR(0);   {Null character}

TYPE
  {Special type for file names}
  FNTYPE = ARRAY[1..12] OF CHAR;

VAR
```

```
  DOCBUFF : ARRAY[1..MAXBYTES] OF
CHAR;
  {Document buffer array}
  FILENAME : FNTYPE;
  DOCSTART : INTEGER;
  ANS : CHAR;
PROCEDURE SPOUT(C : CHAR);
{SPOUT outputs a character directly
through the
 ROM's RST #10 routine, avoiding
any trapping by
 Pascal of the value output. See
the manual
 page 80 for details.}

BEGIN
  INLINE(#FD, #21, #3A, #5C, #DD,
#7E,
         #02, #D7);
END;

PROCEDURE GOTOXY(X, Y : INTEGER);
{Places the cursor at a specified
X,Y location
 on the screen}

BEGIN
  SPOUT(CHR(22));
  SPOUT(CHR(Y));
  SPOUT(CHR(X));
END;

PROCEDURE CLRSCR;
{Clears the screen and places the
cursor at the
 top left hand side of the screen}

BEGIN
  PAGE;
  SPOUT(CHR(22));
  SPOUT(CHR(0));
  SPOUT(CHR(0));
END;

PROCEDURE BANNER;

{Clears the screen and prints the
banner}

BEGIN
  CLRSCR; {Clear the screen}
  GOTOXY(17, 1);
  WRITE('Transfer Utility');
  GOTOXY(5, 2);
  WRITE('Sinclair ASCII Text File
To IBM Text File');
  WRITELN;
  WRITELN;
```

```
END;

PROCEDURE SUMMARY(C : INTEGER; FN :
FNTYPE);

{Summarizes the file transfer
statistics}

BEGIN
   BANNER;
   GOTOXY(0, 11);
   WRITELN('File transferred:   ',
FILENAME);
   WRITELN('Number of bytes
transferred:  ',
      C - 1:5);

   WRITELN;
   WRITELN;
   WRITE('Transfer another file?
(Y/N) > ');
   READLN;
   READ(ANS);

END;
```

Procedure Songanddance

{Introduction to the program}

```
BEGIN

   BANNER;
   WRITELN('This utility is for
transferring the data from');
   WRITELN('Sinclair ASCII text
files to IBM standard');
   WRITELN('text files through the
RS232 interface feature in');
   WRITELN('Gerton Lunter''s ZX
Spectrum emulator.');

   WRITELN;

   WRITELN('For this program to
work, you must first execute');
   WRITELN('the command OPEN#3,"T"
in BASIC and redirect the');
   WRITELN('output of the RS232
interface to an IBM text file.');

   GOTOXY(14, 22);
   WRITELN('Hit Any Key To
Continue');

   READLN;

END;
```

```
PROCEDURE CLEANDOCUMENT;

{This procedure clears out any pre-
existing
 garbage from the document buffer
by loading an array of Nuls.}

BEGIN
   BANNER;
   GOTOXY(20, 11);
   WRITE('Setting Up!');
   {Load the array of nuls saved on
the microdrive}
   TIN('1:NopArr.A$', DOCSTART);

END;

PROCEDURE LOADDOC;

{Loads the document to be
transferred from a
 cassette tape or from an emulator
*.TAP
 file.}

BEGIN
   BANNER;
   GOTOXY(0, 10);
   WRITELN('Enter the name of the
file to load');
   WRITELN('Pad out the stars with
spaces, if needed');
   GOTOXY(0, 13);
   WRITE('************');  {12 stars}
   GOTOXY(0, 13);
   READLN;
   READ(FILENAME);

   BANNER;
   WRITELN('Searching for:   ',
FILENAME);
   WRITELN('Start tape!');
   {The "tape" may be either a
cassette tape or
    a *.TAP file.  Be sure to set
the emulator
    options accordingly.}
   WRITELN;
   WRITELN;
   TIN(FILENAME, DOCSTART);

END;

PROCEDURE MAKEIBM;
```

{This procedure transfers the Sinclair Text file to an
IBM text file.}

```
VAR
   COUNTER : INTEGER;

BEGIN
   BANNER;
   COUNTER := 1;
   WRITELN('Transferring ',
FILENAME, 'To IBM Text File');
   GOTOXY(17, 11);
   WRITELN('Bytes Transferred');
WRITELN;

{WORK LOOP}
   WHILE (COUNTER <= MAXBYTES) AND
      (DOCBUFF[COUNTER] <> NOP) DO
      BEGIN
         GOTOXY(23, 9);          {Place
cursor on screen}
         WRITE(COUNTER:5);       {Display
current count }
         WRITE(CHR(16));         {Open
printer stream    }
         WRITE(DOCBUFF[COUNTER]);
{Transmit character}
         WRITE(CHR(16));         {Close
printer stream   }
         COUNTER := COUNTER + 1;
{Augment counter       }
      END; {WHILE}

      SUMMARY(COUNTER, FILENAME);

END; {MAKEIBM}

(*====== MAIN PROGAM ======*)

BEGIN

   SONGANDDANCE;
   DOCSTART := ADDR(DOCBUFF);

   REPEAT
      CLEANDOCUMENT;
      LOADDOC;
      MAKEIBM;
   UNTIL NOT (ANS IN ['Y', 'y']);

   CLRSCR;
   GOTOXY(20, 5);
   WRITELN('Program By');
   GOTOXY(20, 6);
   WRITELN('David Solly');
   GOTOXY(14, 7);
   WRITELN('Bibliotheca
Sagittarii');
   GOTOXY(18, 8);
   WRITELN('Ottawa, Canada');
```

```
   GOTOXY(18, 9);
   WRITELN('22 May 2002');

END.
```

Step 3:
Using The Transfer Utility Program

The first thing that must be done before starting the program is to redirect the print stream to the RS232 interface. This is done in BASIC by typing: OPEN #3,"B". The best way not to forget this step is to include it in the load and launch program thus:

```
10  OPEN #3, "B": BORDER 1: INK 6:
PAPER 1: CLS: LOAD *M;1;"ibm.C1"
CODE
20  RANDOMIZE USR 24700
30  NEW
```

The next step is to assign an output file for the IBM text that the program generates. To do this select F4 "Change Settings", O "Change RS232 output channel", D "Disk". At this point you will be prompted to enter a suitable name for the IBM text file.

When the program starts, it will prompt you for the name of the Sinclair ASCII text file. The program can come from a file on cassette, from a *.TAP file or an *.MDR file. For a file saved on a microdrive, one simply adds the drive number in front of the file name thus: 1:MyFile.

After the transfer of files is completed, the IBM file has to be closed. To do this go back to the RS232 output options. Select X "Close file". It is also a good idea to return the output to LPT 1 otherwise you risk locking up the Emulator.

---

[i] Examples of such text files are buffer captures from online sessions, files created in M-Script (as it was modified for standard Timex/Sinclair cassette I/O by Jack Dohany), or text files created by the LK DOS program listing to Sinclair ASCII file utility and from similar sources.

[ii] Another description of an "IBM text file" is an "MS-DOS ASCII text file".

[iii] The maximum document size is 16,700 bytes. It might be possible to create a buffer as large as 20,000 bytes but this is close to the limits of HiSoft Pascal's "compile and test" mode. The better approach would be to break up large text files into more manageable pieces.

Using Internet File Formats on the QL

By Timothy Swenson

Those of us in the QL world have not been totally immune from the hype and lure of the Internet. I've seen discussions of writing Web browsers and network drivers for the QL. Although it would be interesting to browse the Internet on the QL, it is not the platform that I am looking to use for my browsing.

Even without the ability to browse the web on the QL, just getting information from the Internet to the QL or vice versa can be very useful. Using a simple Unix Shell account from an Internet Provider and Lynx, a text-only web browser, you can get access to all kinds of information that can be brought to the QL and used.

This article discusses the various formats used on the Internet and how they can be handled on the QL and even how to create files, on the QL, in these formats. The point of the article is that, even though the QL does not have native capabilities to use the Internet, it can still be useful once you get the data off the Internet.

Textual Formats

The written word is distributed on the Internet in a variety of formats. By the written word, I mean documents, papers, books, etc.

ASCII

ASCII text is the lowest common denominator when it comes to computers sharing information. ASCII is known as "pure ASCII text", "pure text", "text file", and so on. Since the QL character set is a superset of ASCII, the QL can handle ASCII text.

The biggest problem is handling the End Of Line (EOL) marker. On the QL is New Line (NL). On the Mac it is Carriage Return (CR). In MS-DOS it is both CR and LF. In Unix, it is just NL, like the QL. If you are using a communications program, it will handle the EOL marker conversion for you. If you are copying files off a disk or transferring data in binary mode, you will need to do the conversion yourself. A number of text editors can strip out CR's. A simple program can be written to take out CR's and/or add LF's.

HTML

HyperText Meta Language is really ASCII text with a number of formatting commands and requires a viewer program to display and print them. There are two HTML viewers for the QL, QMOSAIC and the one that comes with ProWess. QMOSAIC is no longer being developed and is limited in what it can

do. The ProWess browser is new and still being developed and supported.

If you don't have an HTML viewer, you can get the information out of the file by stripping out the HTML formatting commands. striphtml_c is a C program that does this and was published in the QL Hacker's Journal. The data can then be read into QUILL and made presentable.

Since HTML is pure text, you can create HTML documents on the QL with any text editor. The problem is that you have to know HTML yourself. In the PC and Mac world, there are programs that allow a person that does not know HTML to create HTML documents. A popular program is the one that converts from Microsoft Word to HTML. I've seen it used and it produces some nice looking HTML documents.

Learning HTML is not all that difficult. There are only a handful of commands that are necessary for all HTML documents and simple documents can be generated fairly easy. There is a dearth of books available on how to write in HTML. Check your local bookstore or library.

Postscript

Postscript is really a display language that is used in printers. It defines how a page will look, including text, pictures, lines, etc. It is considered an output format. You can edit text and HTML files, but you don't edit Postscript files. Postscript is what comes out of an application and is sent to a printer. For many years if you wanted to distribute a document and keep its look consistent, you would distribute it in Postscript format. The receiver of the file would send the file to a Postscript printer and get an exact copy of the printed document. The limitation for the receiver is that they could not edit the document.

Ghostscript is a freeware Postscript viewer that has been ported to the QL. It's not a simple or small program and requires speed, memory, and some disk space. It really needs a hard disk or an ED disk drive to use it well. It also requires a number of font files, which can eat up disk space. Once a document in read into Ghostscript, it can them be printed to your printer.

Ghostscript supports the display of both text and graphics. If you have a picture done in Postscript, it can be viewed with Ghostscript.

Without Ghostscript, Postscript files can be handled on the QL. All text in Postscript is embedded in the file as text, it's just intermixed with a large number of Postscript commands. Text is always surrounded by ()'s. A simple Postscript text stripped can be written to strip out just the text in the file. This means that any graphic information would be lost, including text done in graphics (like very large letters).

As for creating output in postscript, there is a utility nenscript (nens13_zip), a clone of the Adobe program encript, which is a text to postscript converter. Nenscript is written by Craig Southern and ported to the QL by Jim Gilmour. Version 1.3 is dated June 94. I've never tried the program, so I can't say much about it.

Adobe Acrobat

Adobe (the company that brought you Postscript) has come up with a portable document format called Acrobat (.PDF). Like Postscipt, Acrobat files are display only and are not editable. Like Postscript, Acrobat is designed to be portable across platforms and ensures that the document looks exactly as it was created.

Viewing Acrobat files on the QL is going to be a problem, or so I thought. On Jonathan Hudson's web page he mentions that the latest version of Ghostscript can handle Acrobat files. I was surprised to hear this, but knowing Jonathan, if he says that it does, it does. I feel this a big breakthrough for the QL.

Acrobat is fast becoming THE format for distributing documents. HTML is ok for having formatted text, but each HTML viewer can change how the final product looks. Acrobat keeps your documents looking exactly as you created them. With Ghostscript, you can view all PDF file you get off the Internet.

Now creating Acrobat file on the QL, that's another thing. The program that creates Acrobat files is not available on the QL and I know of no freeware versions available for any platform.

E-mail is composed of only ASCII text, but a number of tricks have been created to allow the sending of binary files through e-mail. All of these tricks involve converting these binary files into an ASCII text file (in code), sending them through e-mail, and then converting them back. If you ever get a binary file sent to you like this, and you don't have the tools to convert it back, the data is of no use to you.

UUENCODE

The original program to convert a binary file to ASCII is UUENCODE and UUDECODE. These programs were created on Unix systems and are very popular in the Unix world. These programs work in conjunction with each other. One converts binary to ASCII (uuencode) and the other converts back (uudecode).

Once you get an e-mail with a uuencoded attachment, you edit out all but the uuencoded part and then pass it through uudecode. If you want to send an e-mail message with a binary file attachment, send the file through uuencode and then send the resultant file via e-mail. Some e-mail handlers only allow messages of up to a certain size. There is a program SPLIT that divides a file into a number of files of X lines (where X can be 100, 200, and so on). uuencode and uudecode come with the C68 distribution. They may come with the GNU text utilities distribution.

MIME

MIME is a newer format standard that works like uuencode, but it includes some intelligence about the original files. If the original file was a graphic file, MIME marks it as such when it converts it. Then at the receiving end, a MIME-compatible program will know it is a graphic file and fire off a graphics program to display the file. MIME is designed to handle graphics, sounds, motion files, etc.

Jonathan Hudson has ported over a few MIME utilities. They allow you to read and create MIME encoded files. I have not played with the utilities, so I can't say much more than this.

E-Mail Digital Signatures

PGP

Digitally signing e-mail and documents is getting to be fairly popular on the Internet. Software distributions, security announcements, and other "official" file are being signed using a program called Pretty Good Privacy (PGP). If you want to verify a digital signature or stamp one of your own, you will need PGP. PGP is available for the QL and as reviewed in a previous issue of QL Today.

Binary Archives

File archivers are ways of joining a number of files into one file, for easier downloading and distribution.

PKZIP

The ZIP format created for the PKZIP and PKUNZIP (.ZIP) utilities is the main archiver and compression program for all PC based files. Since it is very well known, I won't discuss it much here. There are a number QL utilities that both ZIPing and unZIPing. ZIP and InfoZIP are the two that I know of. Both work well and will handle any ZIP file.

GNU ZIP

The GNU folks have come up with their own version

of a archiver and compressor called GNU ZIP or GZIP. GZIP is very popular in the Unix world. GZIP files end with a .GZ extension. GZIP uses a different ZIPing format than PKUNZIP, but I believe it can read and write ZIP files. I've only used ZGIP on .GZ files, so I can't say that I'm correct on this. GZIP has been ported to the QL from the Unix source. The QL version of GZIP will both read and write .GZ files.

TAR

Another Unix file format is a TAR file. TAR is short for Tape ARchive. It does not compress files so much as it puts a bunch of files in one big file. TAR is used to distribute software and is used in conjunction with GZIP and with Compress. Compress the original Unix compression program. Its files end with .Z. You will often see files that end in .TAR.Z or .TAR.GZ. These are TAR files that have been compressed with Compress and GZIP. TAR has been ported to the QL and will both read and write .TAR files. I don't believe Compress has been ported to the QL (at least the Unix compatible version). If you are getting a .TAR file, get the one that ends with .GZ.

Graphic Files

In the early years of home computers, each computer had a different way of storing graphics. Most computers could save a graphic image to tape or disk. Getting graphics from one computer make to another was almost impossible. Then came the standard graphic formats.

RLE

RLE is probably the very first standard graphics file format. RLE stands for Run Length Encoded, which is how the graphics were stored. RLE only supported black and white graphics. Using RLE a picture could be created on a Commodore 64 and displayed on an Apple II. RLE is over 10 years old and has not been popular since the late 80's. If you run into some older archives you may run into an RLE file. Many years ago an RLE viewer was written for the QL. I used to use it sometimes. In fact my first QL to QL modem transfer was of a couple of RLE files.

GIF

GIF was a portable color graphic file format created by CompuServe. Once introduced, it took a few years to become popular. From the late 80's until the mid-90's it was the predominate graphic file format. It is still very popular and is used heavily on web pages. Most of the small graphics you see on web pages are GIF images. GIF had compression built into the file format, so it is a fairly economical way of storing images. A number of GIF viewers have been written for the QL. I know that both UNGIF and GIFVIEW are available in distribution. If you are creating images you want to post to the Internet, ENGIF will take a QL screen file and convert it to a GIF file. Since GIF files can handle up to 256 colors, don't expect many of the newer GIF images to look all that good on a QL.

JPEG

JPEG is the most popular format for images on the Web. If you go to a site that displays full images (takes up the whole screen), odds are you are looking at a JPEG file (.JPG). JPEG is supposed to be better than GIF and have a better compression ratio. I know of one freeware program that allows you to convert to and from JPEG format, but I don't believe it handles QL screen (_SCR) formats. There are some commercial programs, like OpenWorld, that handle a number of graphic formats including JPEG. They would allow you to both create and view JPEG files on the QL.

Sound & Movies

Now we enter an area of file formats that the QL is not yet able to handle.

Sounds

The two primary sound file formats are .WAV and .AU. For PC's, using these formats require the use of a sound card. I have seen a program that will play .AU files out the standard PC speaker, but it is very limited and rather "tinny" sounding. I can see a program being written for the QXL or QPC that will handle these formats, but I can't see it yet for the standard QL.

Movies

The primary movie formats are .MOV, MPEG (.MPG), .AVI (Microsoft created) and .QT (Apple QuickTime). All of these formats require a fairly good resolution (VGA or better), a fair amount of color, and lots of processor time. Most of these movie files can be from 100K to 1 Meg in size. A five second AVI file can be about 300K.

Until there are some better resolution hardware for the QL, I don't see much need to write or port any movie software to the QL.

Conclusion

Let's say that you have only a QL with a modem and Internet access. Using a text web browser like LYNX, a gopher browser, or even just plain FTP, you can download a number of different files off the Internet and use them on the QL. You can even take your QL files and put them in "standard" file formats and upload to the Internet. Doing all of this may not be as easy as having a PC or Mac, but it can be done

The Z88 Source Book

Other Serial Devices

The Z88 should be able to hook up to just about any serial device. The key factor is this, the serial device should not expect any special driver software to run on the computer. Things like scanners require software on the computer to convert the graphic image to text. Without this software, the scanner is only good for graphics. Even with this limitation, there are a number of serial devices that can be hooked up to the Z88.

One such device that I have is a speech converter box, originally designed for the QL, but since SER2 on the QL is almost wired exactly the same as the serial port on the Z88, it interfaces just fine. The speech box expects to receive ASCII text, just as if you were sending the text to a printer. The box then converts it to speech and you hear the results coming out of the speaker. I don't use it much, but it's kind of fun to play with. If a person were blind, they could have the Z88 read through a text file and output it to the speech box so that it could be heard.

TELECOMMUNICATIONS WITH THE Z88

One of the greatest limiting factors about the Z88 is the 8 rows of display. If you are dialing into a remote system they usually assume that you have 24 rows. And the VT52 terminal the Z88 emulates is defined as having 24 rows. When dialing into a Unix system, I have found a way around this limitation. Using the command "stty rows 8" I tell my Unix box that I now have only 8 rows of display. It will then give me formatted output in chunks of 8 rows at a time. This allows me to use vi (a Unix text editor), more, and read my Usenet News with my Z88.

Using Telecommunications to Save Files

I've done a few dumb things with my Z88 that have caused me to lose all of the files stored on it. Things like putting the batteries in backwards can have disastrous effects on your files. I would like to have a Z88 disk drive so that I could back up files to disk while I'm on the road. The cost of a disk drive has prevented me from doing this.

Since I have a modem and dial into my Unix account at work, I have figured out that this would be a good way to back up my files. When I have a file I want to back up I dial into my Unix account and upload the file to it. It may take a bit to transfer, but I will now have a copy of the file saved in a safe place. This does limit me to sending text-only files (no formatted PipeDream documents), but I can live with this limitation.

On-Line Services with the Z88

On-Line Services are the new hot topic in computers. America Online, Prodigy, CompuServe, Delphi, and GEnie are all vying to get you to connect to their service to connect to the rest of the world. Unfortunately, most of these services require that you use their special communications software that makes the most of their service. Of the major On-Line services, I believe that CompuServe is the only one still providing the old text-only interface.

Z88 and the Internet Internet Services

The Internet has a number of ways of getting information: World Wide Web. Also known as the Web or WWW, the World Wide Web is accessed using a Web Browser. Data is in the form of documents, graphics, video, sound, etc. The interface is mouse driven and has "hot links" which when clicked on bring up another Web document/page.

Gopher

Kind of like the Web but uses a menu interface similar to that used by a BBS. The original Gopher interface was character based, but graphical ones were developed. Gopher has almost been taken over by the Web.

Telnet

Allows you to connect or login to another system and start using it. Connecting to a BBS is kind of like telnet-ing.

FTP - File Transfer Protocol

Allows you to transfer files to and from another computer. It only allows commands like GET and PUT. Does not allow you to run an application on another computer (like Telnet does).

Finger

Finger is a protocol/application that queries another computer for information about a person on the computer. Some people have useful information that is returned via the finger command.

Mail

Electronic mail is one of the primary reasons for getting on the Internet. Letters can take minutes instead of days to get where they are going.

USENET

USENET is kind of like the Internet News Service. It's a loose collection of computers sharing messages that their users write. USENET sends articles or "postings" around the world.

How to do this on the Z88

With a little effort you can get your Z88 to access most of these services. The key thing that allows this for the Z88 is a VT52 terminal (emulated on the Z88 via Terminal). VT52 is not as popular as the VT100, but most Unix systems will support it.

To make all this work you will need to get a Unix account on a computer someplace. A number of local Internet Providers allow "shell" accounts. The Unix shell is what gives you a command line prompt (like QDOS or MS-DOS). Once you have access to your Unix account from your Z88, you are on the Internet.

Accessing Web

There is a text-only Web browser called Lynx. I've tried it and it will support VT52, but it has a few problems. The biggest one being that because VT52 does not seem to support inverse characters, you do not know which "hot link" you have moved to. You use the Tab key to move from hot link item to hot link item. If you count the number of tabs and the hot links, you should be able to figure out where you are.

Accessing Gopher

There are some text only gopher browsers. If one is executed off of your local system, it should understand that you only have 8 lines of display (see the STTY command mentioned above). If you are telneting to a gopher browser, then it will assume that you have 24 lines of display.

Accessing USENET

USENET readers are mostly text-only and should be able to handle having only 8 lines of display. I use NN and it works just fine. Other readers are TIN and RN.

Accessing Mail, Telnet, FTP, Finger

All of these services do not depend on having a certain type of display. They will scroll the data down the screen. These services are suitable for use with the Z88.

To use Lynx and Gopher, make sure your Internet Provider has these installed on your host. Even without them, there are ways to access the same information. Even with just an e-mail only account, a number of these services can still be accessed. Below is a list of more interesting sites for services.

Telnet:
Archie (a way to look up stuff available on FTP servers.)
telnet archie.sura.net
telnet archie.unl.edu
Newspapers Online
telnet kanga.ins.cwru.edu
Weather Services
telnet downwind.sprl.umich.edu 3000
Gopher:
Catalog Mart
gopher catalog.savvy.com
Census Information
gopher gopher.census.gov
Currency Exchange
gopher caticsuf.csufresno.edu
Electronic Journals
gopher gopher.enews.com
Finger:
Almanac of Events
finger copi@oddjob.uchicago.edu
Earthquake Info
finger quake@gldfs.cr.usgs.gov
NASA Headline News
finger nasanews@space.mit.edu
Mail:
Archie via E-Mail
mail archie@archie.sura.net
(with Subject of help)
Fax via Internet (send a fax via e-mail!!!)
mail tcp-faq@town.hall.org   (info)
mail tcp-coverage@town.hall.org (where you can fax)

FTP via E-Mail
mail ftpmail@decwrl.dec.com
(in body of message put help or ftplist)

Finger via E-Mail
mail infobot@infomania.com
(with Subject of #HELP)
Gopher via E-Mail
mail gophermail@calvin.edu
This is just a small listing of what is available. The key thing to get is that with a Z88 you can still reach a large percent of the information available on the Internet.

DOING THINGS WITH THE Z88
The Z88 as a PDA/PIM

The terms Personal Digital Assistant (PDA) and Personal Information Manager (PIM) have been used a lot in the press. A PDA has been used to define what is an Apple Newton or Psion Series 3. It can be considered to be a small hardware device that performs tasks like scheduling (with alarm), phone number list, etc.. Some PDAs are more limited (like the Casio Boss, or Sharp Wizard) where as some are more open ended (Newton and Series 3). A PIM is usually a piece of software for a standard PC that performs similar functions as a PDA.

After looking at my Z88, I've noticed that it seems to fall within the definition of a PDA. The Calendar, Diary, and Alarm applications can be used together to set up a nice time schedule and reminder. The Diary allows you to keep track of schedules by day and allows you to insert comments or memos about the day's events. Zipping between days is fairly fast with the Calendar.

Using the Z88 in a Home Office

One trend that I've been interested in the last few years is the Home Office. A Home Office is a room or section of a room set up to do office-like work. It can be designed for doing office work at home, running a business out of your home, or keeping your personal/home life organized like a business. With the complexities of taxes, investments, home ownership, etc., your personal life is starting to look like you are running a business.

The Home Office is centered around a computer, it's software, and it's peripherals. Most Home Office computers are configured just like their counterparts at the office. There are also Home Office designed "appliances" like fax machines, answering machines, small copiers, etc. The Z88 can be fairly functional when used to run a business or home. It's word processor is adequate for most uses. It's spread sheet can be used for most spreadsheet needs.

For the applications that are not built into the Z88, the BBC Basic facility allows you to write your own application. They don't need to be too fancy, just make them functional enough to do the job. Remember, short Basic programs take up less space than longer full-blown ones, and space is at a premium on the Z88.

Although I would not have a Z88 take on a full blown 486 system, it can still do well, despite it's limitations. If you only have a Z88, file storage can be a problem. EPROMs

can get mighty expensive and Z88 disk drives are not exactly cheap. I feel the Z88 works best with another computer to be used as a file server. Dumping Z88 files on another computer keeps important files backed up and can free some much needed memory in the Z88.

The advantage of the Z88 is that your office computer can go with you on the road. If you have a tendency to travel, having your Z88 along will allow you to keep right on working.

If you are interested in Home Offices, there are a number of books out on the subject. One good one that covers more non-computer related items is "Organizing Your Home Office for Success" by Lisa Kanarek. It spends a lot of time discussing how to keep yourself organized. It does cover computers, but only at a more general level. One good magazine is "Home Office Computing." It covers PC's and Mac's, but also has some general information tips. Part of the fun is figuring out how to adapt what you read in the magazines to the Z88.

Things to Remember When Using The Z88

The Z88 comes with a few limitations besides the obvious ones. Keeping these limitations in mind should help in keeping a harmonious relationship with your Z88.

Be Aware of Memory Constraints.
Unless you splurged on a couple 1 Meg add-ons, your Z88 memory can be a little cramped. Try not to do anything that would eat up a lot of memory. Don't make back ups of your Z88 files on the Z88. Put them on another computer or on disk.

Use Short Hand Notations.
In using an application like the Diary, use short hand notations to stand for your more common phrases. P: can mean Phone, W: can mean to write a note or letter, F: can mean to send a fax, and FU can mean to Follow-Up. Notations like these can save bytes here and there.

Back Up Often to Disk or another Computer.
The Z88 memory is volatile. One wrong or stupid move and ZAP, everything is gone. Back up your important files almost daily to either disk or to another computer. If you are using your Z88 for business, it is even more critical to back your files up (at least those that have changed since the last backup).

One little confession to show you how easy it is to ZAP your Z88. When the battery low warning came on, I grabbed my spare batteries, opened the back of the Z88, took out the old batteries, put in the new ones, buttoned it back up, and set the Z88 off to the side for a while. The next time I went to turn it on, it would not turn on. The reason: I put the new batteries in backwards. Result:
I lost two important files. It can happen to you.

Tips that apply to Using the Z88 As a PDA/PIM

Make Time to Use Your Z88 to Manage Your Time.
If you are going to use the Z88 to help manage your life, job, or business, take the time out of every day to update your Z88 for what happened today and prepare for the next day. Make sure to add all of the items on your schedule.

What good is a personal management system if you don't use it?

Find a Good Time Management Book
Getting a hold of a good time management / personal planning book can help you get the most of using your Z88 as a PDA/PIM. You need to build a management system and use the Z88 to help automate that system. The Z88 can not create the system for you.

SOURCES

Suppliers

FDW Computing Frank Davis PO Box 17 Mexico, IN 46958	W. N. Richardson & Co. 6 Ravensmead Chalfont-St-Peter Buckinghamshire, SL9 ONB, UK
Rakewell Ltd 24 Putnams Dr Ashton Clinton, Aylesbury Buckinghamshire, HP22 5HH, UK	Domino Cubes Mike Fink 352 7th Ave, 15th Floor New York, NY 10001
Woodward Technology P.O. Box 15 Belper, Derbyshire UK PE56 OXE	QHJ Freeware c/o Tim Swenson 2455 Medallion Dr. Union City CA 94587-1914
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Web Pages
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http://www.cl.cam.ac.uk/users/jrh/devnotes
Z88 Forever Page
http://members.aol.com/Z88Forever/Z88home.htm
Tim Swenson's Page
http://www.serve.com/swensont/
Z88 Source Book, Z88 Mailing List
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www.geocities.com/siliconvalley/pines

I (Tim Swenson) am keeping an up-to-date list of Z88 users with Internet access (this includes such on-line providers like CompuServe, GEnie, etc). Please send an e-mail message to one of the above addresses and I will send you the latest list. If you wish, I can add you to the list. This list is designed to work like a phone book and is not a "true" mailing list or LISTSERV.

General Laptop Book

The book "The Complete Laptop Guide" by David Rothman is a good source for general laptop use. It focuses mostly on MS-DOS and MAC portables, but it has a couple of chapters applicable to all laptop users. These sections include traveling abroad with a laptop, getting your laptop through customs, telecommunications, on-line sources, and the basics of electronic mail.

Z88 Rumors and Tid Bits of Eclectic Information
This section is designed to cover the more interesting bits of the Z88 and who has used it.

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January/February 1984   **Volume 4, Number 1**

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